

REMARKS

Claims 25-29 are pending. By this Amendment, claims 22-24 are canceled without prejudice to or disclaimer of the subject matter contained therein, and new claims 25-29 are added. Reconsideration of the application in view of the amendments and the following remarks is respectfully requested.

I. Rejection Under 35 U.S.C. §103(a)

Claims 22-24 stand rejected under 35 U.S.C. §103(a) over Chen (U.S. Patent No. 6,063,647) in view of Hashimoto (U.S. Patent No. 6,475,896). The rejection is respectfully traversed.

Claims 22-24 are canceled, and thus the rejection with respect to these claims is now moot. However, because the rejection is relevant to the newly added claims 25-28, the following Remarks are made.

With respect to independent claim 25, neither Chen nor Hashimoto, individually or in combination, disclose or suggest a flexible printed wiring board including at least a metal bump located in an opening, connected at its bottom face to the metal film and having a height greater than the thickness of the resin coating, wherein the resin coating is removed at a portion located at a top face of the metal bump and the top face of the metal bump is exposed from the surface of the resin coating, as recited in independent claim 25.

Instead, Chen discloses in Fig. 1c and Fig. 3a that only a portion of the insulating layer 36 is removed to expose a portion of the bump 30. For example, Chen discloses that the removal of the insulation layer 36 should be limited to the area proximate to apexes 32 of the bumps 30, at points substantially beyond plane A. Only small amounts of the insulating layer 36 should be removed during this process, so that a sufficient portion of the insulating layer 36, remains on the bump and substrate of the second element 20 (Fig. 1c). See for example, col. 6, lines 30-37.

C

As such, Chen does not disclose, teach or even suggest the metal bump located in the opening, connected at its bottom face to the metal film and having a height greater than the thickness of the resin coating, wherein the resin coating is removed at a portion located at a top face of the metal bump and the top face of the metal bump is exposed from the surface of the resin coating.

Hashimoto does not compensate for the above noted deficiencies of Chen. Specifically, Hashimoto discloses in Figs. 4a-4c, that a photosensitive solder resist layer 28 is formed by application over the whole surface of the wafer 10. A portion of the solder resist layer 28 covering the solder 26 and the neighboring region is then removed. However, Hashimoto further discloses that the layer 14 is the resin layer. See col. 11, lines 23-47.

As such, Hashimoto does not disclose, teach or even suggest that the metal bump located in the opening, connected to its bottom face to the metal film and having a height greater than the thickness of the resin coating, wherein the resin coating is removed at a portion located at a top face of the metal bump and the top face of the metal bump is exposed from the surface of the resin coating.

Accordingly, independent claim 25 defines patentable subject matter. Claim 26 depends from independent claim 25, and therefore also defines patentable subject matter.

With respect to independent claim 27, neither Chen nor Hashimoto, individually or in combination, disclose or suggest a flexible printed wiring board including at least a metal bump located in an opening, connected at its bottom face to the metal film and having a height greater than the thickness of the resin coating, wherein the resin coating is removed at a portion located at a top face of the metal bump and the top face of the metal bump is exposed from the surface of the resin coating, wherein the resin coating having a first resin coating made of rigid resin close contacted to the metal film, and a second resin coating

C

having adhesive close contacted to the first resin coating, and the second resin coating is exposed, as recited in independent claim 27.

Neither Chen nor Hashimoto, individually or in combination, disclose or suggest the above noted features for reasons as discussed above.

Accordingly, independent claim 27 defines patentable subject matter. Claims 28 and 29 depend from independent claim 27, and therefore also define patentable subject matter.

Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

II. Conclusion

In view of the foregoing amendments and remarks, this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 25-29 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Yong S. Choi
Registration No. 43,324

JAO:YSC/dmw

Date: July 2, 2003

Attachment:

Petition for Extension of Time

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
